

Application No. 09/906704

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for controlling data transfer between first and a plurality of storage devices, comprising:

receiving first data for storage at a transport master, wherein said first data for storage is addressed to said transport master;

receiving said first data for storage at a transport slave, wherein said first data for storage is addressed to said transport master, and wherein said first data for storage is received at said transport master and said transport slave substantially simultaneously;

providing from said transport master said first data for storage to a first storage device interface;

providing from said transport slave said first data for storage to a second storage device interface, wherein said first data for storage is provided to said first device interface and to said second device interface substantially simultaneously;

storing said first data for storage on a first storage device; and
storing said first data for storage on a second storage device.

2. (Currently Amended) The method of Claim 1, further comprising:

receiving a request for one of said first data and second data at said transport master, wherein said request for data is addressed to said transport master;

receiving said request for one of said first data and second data at said transport slave, wherein said request for data is addressed to said transport master;

providing from said transport master said request for one of said first data and second data to said first storage device interface;

providing from said transport slave said request for one of said first data and second data to said second storage device interface; and

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retrieving said requested one of said first data and second data from said first storage device, one of said first data and second data from said second storage device, wherein in a normal operating mode said storage device is provided to said host and said requested one of said first data and second data from said first storage device is provided by said transport master to said host and said requested one of said first data and second data from said second storage device is not provided to said host.

3. (Currently Amended) The method of Claim 2, wherein in a failover mode, said requested one of said first data and second data from said first storage device is not provided to said host and said requested one of said first data and second data from said second storage device is provided by said transport slave to said host.

4. (Currently Amended) The method of Claim 1, further comprising:
passing a write confirmation signal from said first storage device interface to said transport master; and
passing a write confirmation signal from said second storage device interface to said transport slave.

5. (Currently Amended) The method of Claim 1, further comprising:
passing a write confirmation signal from said first storage device interface to said transport master;
passing a write failure signal from said second storage device interface to said transport slave;
providing said write failure signal to said transport master; and
notifying said host of said write failure signal.

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6. (Currently Amended) The method of Claim 1, wherein in a non-RAID operating mode, said first data for storage and addressed to said transport master is received by said transport slave, is not stored on said second storage device and is stored in said first storage device.

7. (Currently Amended) The method of Claim 1, wherein said step of providing data to said first device interface and to said second device interface comprises constructing a data packet and providing said data packet to said first device interface and to said second device interface.

8. (Original) The method of Claim 1, wherein said transport master and said transport slave are interconnected to a host system bus by a system bus interface.

9. (Original) The method of Claim 1, wherein said method implements a RAID level 1 storage scheme.

10. (Currently Amended) A method for storing and retrieving data in a RAID 1 system, comprising:

- enabling RAID 1 operation;
- receiving data for storage from a first communications bus at a system bus interface, wherein said data for storage is addressed to a transport master;
- providing said data for storage to said transport master;
- providing said data for storage to a transport slave at substantially the same time said data for storage is provided to said transport master; and
- storing said data in a first storage device and a second storage device substantially simultaneously.

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11. (Original) The method of Claim 10, wherein said step of enabling RAID 1 operation comprises enabling said transport slave to act on at least one of commands and data addressed to said transport master.

12. (Original) The method of Claim 11, wherein a RAID 1 enable signal is provided to enable RAID 1 operation.

13. (Original) The method of Claim 12, wherein said RAID 1 enable signal is generated by at least one of a host processor and a local processor.

14. (Original) The method of Claim 10, further comprising retrieving data from said first and second storage devices, wherein said data retrieved from said first storage device is passed to said transport master, and wherein said data retrieved from said second device is passed to said transport slave.

15. (Original) The method of Claim 14, wherein a request for data addressed to said transport master is provided to said transport master at substantially the same time that said request for data is provided to said transport slave.

16. (Currently Amended) A RAID controller, comprising:
a system bus interface;
a transport master interconnected to said system bus interface;
a first device interface interconnected to said transport master;
a first storage device directly interconnected to said first device interface;
a transport slave interconnected to said system bus interface; and
a second device interface interconnected to said transport master slave;

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ng RAID 1 ~~wherein a second storage device directly interconnected to said second device interface~~ ~~and~~ ~~wherein~~ ~~at least one of a command and data addressed to said transport master and received at said system bus interface is passed to said transport master and is passed to said transport slave substantially simultaneously.~~

17. (Original) The RAID controller of Claim 16, wherein in a first mode of operation at least one of a command and data received at said transport master is provided to said first device interface and said at least one of a command and data received at said transport slave is provided to said second device interface.

18. (Original) The RAID controller of Claim 17, wherein in a second mode of operation data received at said transport master is provided to said first device interface, and wherein said data received at said transport slave is not provided to said second device interface.

19. (Original) The RAID controller of Claim 16, further comprising:
a multiplexer comprising a first input interconnected to said first device interface, a second input interconnected to said second device interface, and an output interconnected to said transport master.

20. (Currently Amended) The RAID controller of Claim 19, wherein in a normal operating mode data read from said first storage device is provided to said multiplexer, wherein said data read from said first storage device is provided to said transport master, wherein data read from said second storage device is provided to said transport slave and to said multiplexer, and wherein said data read from said second storage device is not passed by said multiplexer to said transport master.

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21. (Currently Amended) The RAID controller of Claim 19, wherein in a failover mode data read from said first storage device is provided to said multiplexer, wherein said data read from said first storage device is not passed by said multiplexer to said transport master, wherein data read from said second storage device is provided to said transport master and to said multiplexer, and wherein said data read from said second storage device is passed by said multiplexer to said transport master.

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